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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,148	10/22/2001	Joseph David Rigney	13DV13878	4144

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EXAMINER

ROSENBAUM, IRENE CUDA

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/086,148

Applicant(s)

RIGNEY ET AL.

Examiner

Irene Cuda-Rosenbaum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaraj et al (5,723,078). Nagaraj et al teach a method of localized repair of turbine components having a surface with a damaged thermal barrier coating (column 4, lines 35-45) including cleaning (preferably by grit blasting) a spalled region of the exposed surface of the component (column 4, lines 46-51), texturing the exposed surface to produce an array of grooves (column 4, line 61 - column 5, line 10), and depositing a replacement thermal barrier coating over substantially only the textured surface (column 5, line 21 - line 44). Nagaraj et al fail to state that the spacing, geometry, etc of the grooves is predetermined. However, it is common practice in mechanical manufacture to evaluate and optimize design characteristics prior to implementation and then to follow those design criteria and official notice is taken of such.

Nagaraj et al further fail to teach the particulars of the texturing apparatus (laser beam particulars or electron beam) and the particulars of the groove size and spacing. However, the particulars of the apparatus used to perform the texturing are considered apparatus limitations which do not materially effect the method performed and are considered to be routinely determined through design optimization. Further the

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shape , spacing , etc of the grooves are considered design limitations which would have been obvious to one of ordinary skill in the art at the time the invention was made since it is old and well known to optimize article design features through routine experimentation.

Furthermore whether it is the bond coat or the substrate which is textured would depend on the extent of damage and how much to remove , etc, would be obvious to one of ordinary skill in the art based on an observation of the damaged article.

The article of claim 27 is inherently results from the method of Nagarj et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Cuda-Rosenbaum whose telephone number is 703-308-1792. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 308-1148. The fax phone numbers for the organization where this application or proceeding is assigned are 7033087058 for regular communications and 7033087058 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1148.

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March 21, 2003

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